

ERROR CORRECTION/DETECTION CODE ADJUSTMENT FOR KNOWN DATA PATTERN SUBSTITUTION

ABSTRACT OF THE DISCLOSURE

[0043] Techniques for updating cyclic redundancy check (CRC) bytes for data sectors that have been reassigned to a new logical block address (LBA) are provided. The entire set of CRC check bytes is not recalculated each time that a data sector is reassigned to a new LBA. Instead, only the portion of the CRC check bytes effected by the new LBA are updated. An exclusive OR function is performed on the old LBA and the new reassigned LBA for a data sector. Galois Field multiplication is then performed on the result of the XOR function to generate updated portions of CRC bytes that correspond to the reassigned LBA. An exclusive OR function is then performed on the updated portions of the CRC bytes and the old CRC bytes to generate new CRC bytes.

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